

New American Home Showcases Energy Efficiency and Durability

The New American Home for 2001 was a once-in-a-lifetime project for Hedgewood Properties. The New American Home is an annual showcase project sponsored by the National Association of Home Builders' National Council of the Housing Industry. To design and build a home that is attractive as well as energy efficient, Hedgewood teamed up with Building America's IBACOS Consortium and the Southface Energy Institute, a nonprofit environmental building group based in Atlanta. The goal was to achieve a rating of 90 on the Home Energy Rating System scale. To achieve this high level of energy efficiency, Hedgewood integrated many advanced building technologies, including two high efficiency furnaces, an energy recovery ventilator, low-e argon-filled windows, and improved insulation.

In addition to these energy-efficient technologies, many durability-related improvements were added to the home's design. Among these improvements: an airtight cathedral ceiling to prevent condensation

inside the ceiling during the winter, and close attention to drainage control details that allow the walls to dry properly. It is likely that because of these investments, the entire building assembly will be more durable and long lasting, helping to ensure that The New American Home will remain energy efficient for years to come.

Hedgewood should benefit from reduced warranty and liability claims as a result of these additional technologies. They also learned several important construction lessons in the areas of airtightness and moisture control in the project and IBACOS recommended that Hedgewood incorporate each lesson in future projects.

The New American Home will be monitored extensively for one year while it is occupied. Monitoring data will be posted at a special Internet site and will be accessible to individuals and organizations involved in the project.

For more information on IBACOS' energy design approach for The New American Home, please contact John Broniek at (412) 765-3021 or jbroniek@ibacos.com.★



Hedgewood Properties' New American Home in Atlanta is a model of energy efficiency.

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Buildings for the 21st Century



U.S. Department of Energy

Office of Energy Efficiency and
Renewable Energy

Office of Building Technology,
State and Community Programs

Champion Enterprises Debuts New Modular Line at Builders Show

Champion Enterprises will debut the model of a new line of energy-efficient modular homes at the International Builders' Show in Atlanta as part of the show's tour of homes. The tour model is a prototype of the "Genesis Homes" line of modular homes to be produced by Champion. A second, identical home has been built on a full foundation in Lake City, Florida.

Champion worked with Building America's Consortium for Advanced Residential Building (CARB) to develop a cost-effective set of technologies that allows the homes to meet both ENERGY STAR® and Atlanta EarthCraft House™ requirements. In addition, Building America contributed to the development of the line's new design.

The key features of the Genesis line include such "green building" technologies as recycled content materials and factory waste, hybrid modular/panelized construction, low-flow plumbing fixtures, and paints containing low amounts of volatile organic compounds.

Champion plans to produce the new line of modular homes in 12 of its approximately 60 plants across the nation.

The Genesis line is a collaborative project supported by CARB, Building America, and the Partnership for Advancing Technology in Housing program (a multi-agency initiative spearheaded by the U.S. Department of Housing and Urban Development).

For more information on the Genesis line, call (877) 523-5435 or visit www.geneshomes.com.★



An architectural rendering of the Genesis modular home line produced by Champion Enterprises. Visitors are welcome to tour the completed home, which will be built on site at the International Builders' Show.

'SIPs' House to Demonstrate Advanced Technologies

The Structural Insulated Panel Association (SIPA) teamed up with APA—The Engineered Wood Association to build a demonstration house to exhibit advanced wood products, building systems, and durable building practices using Building America systems at the International Builders' Show.

The walls, roof, and first floor of the 1,570-ft², two-story, southern colonial home were built with structural insulated panels (SIPs) to demonstrate how a typical SIP wall with a 3.5-inch expanded polystyrene core is constructed. According to SIPA, using SIPs helps ensure that the house will meet the criteria for the ENERGY STAR® and Building America programs and will qualify as an EarthCraft House™. The house also features I-joists, glulam beams, and floor sheathing, which SIPA asserts are more resource-efficient than standard wood-frame construction.

The house will be donated to the Martin Luther King Jr. housing development near downtown Atlanta.

For more information, contact Bill Wachtler at (253) 858-7472 or billw@sips.org.★

Green Builder Program Aids Atlanta Builders

The EarthCraft House™ is a voluntary green builder program that serves as a "blueprint" for healthy, comfortable, and affordable homes that protect the environment. As members of EarthCraft House™, builders receive training, one-on-one design and construction advice, marketing materials, and direct referrals to environmental building suppliers. Each house must pass a final inspection by an EarthCraft House™ inspector and meet a minimum of 150 points in 12 environmental areas. EarthCraft House™ is a program of the Greater Atlanta Home Builders Association, in partnership with Southface Energy Institute and government and industry leaders, including the Building America program.

For more information, contact the Greater Atlanta Home Builders Association at (770) 938-9900 or visit the EarthCraft House™ Web site at www.earthcrafthouse.com.★

Building America News in Brief

- **Building Science Consortium** and **Cobb County Habitat for Humanity** recently finished construction on a single-family home in Smyrna, Georgia. Louisiana-Pacific (LP) Corporation initiated construction for this house and contributed \$40,000 for its production. Through LP's assistance, the house meets the "Engineered for Life" platinum level, which qualifies homeowners for utility bill guarantees. The house features controlled ventilation, high-performance windows, and advanced framing.

For more information, contact Betsy Pettit at (978) 589-5100 or Betsy@buildingscience.com.

- **The National Association of Home Builders Research Center**, in partnership with the U.S. Department of Energy and Building America, will announce the EnergyValue Housing Award winners during a press conference on February 9 at the International Builders Show. The awards ceremony honoring the winners will be held at the Green Building Conference on March 20 in Seattle.

For more information on the awards ceremony, contact Debi Baione at (800) 638-6323.

- **Building Science Consortium** and **Health-E Community Enterprises** worked together to design a series of exceptionally healthy, energy-efficient houses in the Fairburn Commons community of Atlanta. The new, single-

family homes were built to Building America and EarthCraft House™ standards. Dan Reicher, Department of Energy Assistant Secretary for Energy Efficiency and Renewable Energy, toured the homes during the community ribbon cutting.

For more information, contact Betsy Pettit at (978) 589-5700 or Betsy@buildingscience.com.

- **Venture Homes, Inc.**, teamed up with **IBACOS** and the Building America program to create an integrated approach to designing and constructing a high-performance, energy-efficient pilot home in the Cypress Club subdivision near Atlanta. The home features sealed ductwork to reduce leakage, gasketed electrical boxes and air/weather barrier installation to reduce air infiltration, and an intermittent, supply-side ventilation system.

For more information, contact Brad Oberg at (412) 765-3664 or boberg@ibacos.com.

- **Hedgewood Properties** wanted to distinguish themselves from other builders in the congested Atlanta market by taking their home-building philosophy to a higher level of energy efficiency and quality. This decision led to their Building America partnership with IBACOS and the construction of a pilot home in the Edmund Park subdivision just east of downtown Atlanta. The pilot home's key features include advanced windows,

mechanical ventilation, and 12 SEER air-conditioning units.

For more information on the Edmund Park pilot home, contact Brad Oberg at (412) 765-3664 or boberg@ibacos.com.

- Through a DOE State Energy program special projects grant, the **Georgia Environmental Facilities Authority**, in cooperation with Building America, the **Southface Energy Institute**, and the **EarthCraft House™** program, are coordinating a series of educational programs and activities to inform attendees at the International Builders' Show about Building America success stories. Several presentations at the conference will highlight the Building America program, and attendees will be able to tour several local Building America and EarthCraft homes.

EarthCraft and Building America have formed a partnership that will provide technical assistance and training to more than 250 builders, appraisers, mortgage lenders, and real estate professionals over the next year. In April, Southface will present a one-day training session for Georgia builders, which will teach participants about sustainable home construction and will feature Joe Lstiburek, of Building Science Consortium, as the instructor.

For more information, contact Dennis Creech at (404) 872-3549 or dcreech@



BUILDINGS FOR THE 21ST CENTURY

Buildings that are more energy-efficient, comfortable, and affordable ... that's the goal of DOE's Office of Building Technology, State and Community Programs (BTS). To accelerate the development and wide application of energy efficiency measures, BTS:

- Conducts R&D on technologies and concepts for energy efficiency, working closely with the building industry and with manufacturers of materials, equipment, and appliances
- Promotes energy/money saving opportunities to both builders and buyers of homes and commercial buildings
- Works with state and local regulatory groups to improve building codes, appliance standards, and guidelines for efficient energy use
- Provides support and grants to states and communities for deployment of energy-efficient technologies and practices.

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www.pathnet.org



www.energystar.gov



Building America Program

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Building America Overview

The Program

The U.S. Department of Energy's Building America Program is reengineering the American home for energy efficiency and affordability. Building America works with the residential building industry to develop and implement innovative building processes and technologies — innovations that save builders and homeowners millions of dollars in construction and energy costs. This industry-led, cost-shared partnership program uses a systems engineering approach to reduce energy use, construction time, and construction waste by as much as 50%.

The Approach

Building America's systems engineering approach unites segments of the building industry that have traditionally worked independently of one another. It forms teams of architects, engineers, builders, equipment manufacturers, material suppliers, community planners, mortgage lenders, and contractor trades. There are five teams comprising more than 180 different companies.

The Results

Each Building America team is constructing test homes and developing community-scale projects that incorporate its systems innovations. More than 2,000 energy-efficient houses have been built by the teams to date. ★

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